Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Calumet Lubricants Company LP
Calumet Princeton Refinery
Princeton, Bossier Parish, Louisiana
Agency Interest Number: 1224
Activity Number: PER20080002
Proposed Permit Number: 0400-00004-V5

I. APPLICANT

Company:
Calumet Lubricants Company LP - Princeton Refinery
10234 Hwy 157
Princeton, Louisiana 71067

Facility:
Calumet Princeton Refinery
10234 Hwy 157
Princeton, Bossier Parish, Louisiana

Approximate UTM coordinates are 451.9 kilometers East and
3605.6 kilometers North, Zone 15
SIC Code: 2911

II. FACILITY AND CURRENT PERMIT STATUS

Calumet Princeton Refinery distills crude oil to produce asphalt, lube oils and diesel. After desalting, light and heavy gas oil are separated by distillation in the temperature range of 150 to 750°F. Vacuum distillation is employed to separate heavier crudes into fractions. Lube stocks are sent to the Hydrocal unit for further treatment and refining.

Calumet Lubricants Co LP - Princeton Refinery is a designated Part 70 source. One Part 70 permit has been issued to the operating unit within the Calumet Princeton Refinery. This include:

Permit No.	Unit or Source	Date Issued
0400-00004-V4	Entire Facility	02/27/2008

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III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on October 3, 2008, requesting a Part 70 operating permit for the Calumet Princeton Refinery. Additional information dated January 6, 2009 and January 13, 2009 were also submitted.

Project

This project will bring an average of 372 barrels per day of paraffinic vacuum tower bottoms (VTM) from Calumet Shreveport Refinery to process in Asphalt Heater B and/or C under the Asphalt Cap along with naphthenic VTB from Princeton.

Proposed Permit

1. Transport an average of 372 barrels per day of paraffinic vacuum tower bottoms (VTM) from Calumet Shreveport Refinery to process in Asphalt Heater B and/or C under the Asphalt Cap along with naphthenic VTB from Princeton. The new paraffinic VTB from Shreveport Refinery will contain 2.5% sulfur compared to the current sulfur weight percent of 0.57% in the naphthenic VTB from Princeton. Calumet will blend 80% of the naphthenic VTB with 20% of the new paraffinic VTB from Shreveport. Based on a weighted average of 0.96% sulfur in the mixture, an increase of 25.82 tpy of SO_2 emissions will result from this modification of the Asphalt CAP;
2. Change the operating rate of Asphalt Cap to 678,900 barrels per year. In the last application, a transcription error in the text resulted in an incorrect operating rate in the permit. The emissions and assumptions were based on 678,900 barrels per year, so there is no emission increases associated with this correction;
3. Add Hydrogen Sulfide emissions from Tank T-10003, Asphalt Storage Tank, which will contain the 80:20 blend of Asphalt;
4. Delete the requirements of 40 CFR 60 Subpart J for Emission Point PH-27/ (EQT017), Hydrogen Reformer. Per 40 CFR 60.105(a)(4)(iv)(c), the owner of operator of a fuel gas combustion device is exempt from the requirements of Subpart J for fuel gas streams combusted in a fuel gas combustion device that are inherently low in sulfur content; and
5. Remove applicable regulations under NSPS Subpart J for Emission Point 07-3 (EQT236), Hydrogen Plant Heater. Add applicable requirements under NSPS Subpart Ja, but this emission point is exempt from monitoring, per 40CFR107a(a)(3)(iii) for fuel gas streams combusted in a fuel gas combustion device that are inherently low in sulfur content.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM_{10}	17.83	17.83	-
SO_2	99.37	125.19	+ 25.82
NO_X	187.74	187.74	-
CO	282.38	282.38	-
VOC	386.87	386.91	+ 0.04

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
None		

Prevention of Significant Deterioration/Nonattainment Review

SO_2 Project Summary

Emission Point ID	Pre-Project Allowables (TPY)	Baseline Actual Emissions (over 24-month period)*	Projected Actual Emissions (TPY)	Post-Project Potential to Emit (TPY)	Change	Significant Thresholds	Netting Required?
ASPHALT CAP	38.37	29.26	64.19	64.19	34.93	40	No

*SO_2 - 24-Month Period: 01/01/2006 – 12/31/2007

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Streamlined Equipment Leak Monitoring Program

Not Applicable

MACT Requirements

Not Applicable

Air Quality Analysis

Dispersion Model Used: ISCST-3

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
SO_2	Annual	72.1 $\mu g/m^3$	80.00 $\mu g/m^3$
CO	8-hr	2109.1 $\mu g/m^3$	10000 $\mu g/m^3$
NO_x	Annual	18.9 $\mu g/m^3$	100 $\mu g/m^3$

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

Not Applicable

VI. PERIODIC MONITORING

None

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VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.